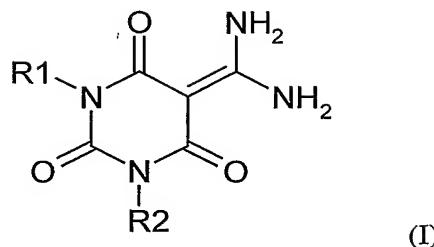


What is claimed is:

1. A compound of formula (I)



5 wherein,

R<sup>1</sup> and R<sup>2</sup> are the same or are different and are C<sub>1-8</sub> alkyl, C<sub>2-8</sub> alkylene, C<sub>3-8</sub> cycloalkyl, aryl, heteroaryl, heterocycloalkyl, C<sub>3-6</sub> cycloalkylaryl, or heterocycloaryl; wherein said alkyl, alkylene, cycloalkyl, aryl, heteroaryl, heterocyclyl, cycloalkylaryl, or heterocycloaryl are unsubstituted or substituted by one or more groups selected from the group consisting of halogen, C<sub>1-8</sub> alkyl, C<sub>1-8</sub> alkoxy, C<sub>1-8</sub> thioalkoxy, cycloalkyl, aryl, heteroaryl, heterocycloalkyl, 10 CF<sub>3</sub>, SCF<sub>3</sub>, NHC(O)<sub>n</sub>R<sup>5</sup>, S(O)<sub>m</sub>R<sup>5</sup>, S(O)<sub>2</sub>NR<sup>5</sup>R<sup>6</sup>, C(S)NR<sup>5</sup>R<sup>6</sup>, CONR<sup>5</sup>R<sup>6</sup>, C(O)<sub>n</sub>R<sup>5</sup>;

n is 0, 1 or 2;

m is 0, 1 or 2;

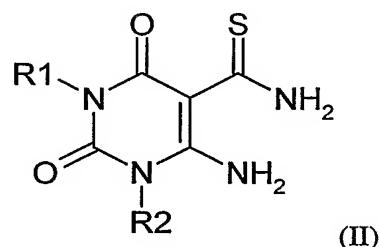
R<sup>5</sup> is hydrogen, alkyl, aryl, alkylaryl, heterocycloalkyl, or heteroaryl and is 15 unsubstituted or substituted by one or more groups selected from the group consisting of alkyl, C<sub>1-8</sub> alkoxy, aryl, heteroaryl, halogen, NO<sub>2</sub>, CN, N<sub>3</sub>, SCF<sub>3</sub>, and CF<sub>3</sub>;

R<sup>6</sup> is hydrogen, alkyl, aryl, alkylaryl, heterocycloalkyl, or heteroaryl and is 20 unsubstituted or substituted by one or more groups selected from the group consisting of alkyl, C<sub>1-8</sub> alkoxy, aryl, heteroaryl, halogen, NO<sub>2</sub>, CN, N<sub>3</sub>, SCF<sub>3</sub>, and CF<sub>3</sub>, or when R<sup>1</sup> and/or R<sup>2</sup> contains S(O)<sub>2</sub>NR<sup>5</sup>R<sup>6</sup>, CONR<sup>5</sup>R<sup>6</sup>, or C(S)NR<sup>5</sup>R<sup>6</sup>, then R<sup>5</sup>R<sup>6</sup> together with the nitrogen may form a heterocyclic ring; or

a pharmaceutically acceptable salt or solvate thereof.

2. A compound of formula (II)

25



wherein,

R<sup>1</sup> and R<sup>2</sup> are the same or are different and are C<sub>1-8</sub> alkyl, C<sub>2-8</sub> alkylene, C<sub>3-8</sub> cycloalkyl, aryl, heteroaryl, heterocycloalkyl, C<sub>3-6</sub> cycloalkylaryl, or heterocycloaryl; wherein said alkyl, alkylene, cycloalkyl, aryl, heteroaryl, heterocyclyl, cycloalkylaryl, or heterocycloaryl are

5 unsubstituted or substituted by one or more groups selected from the group consisting of halogen, C<sub>1-8</sub> alkyl, C<sub>1-8</sub> alkoxy, C<sub>1-8</sub> thioalkoxy, cycloalkyl, aryl, heteroaryl, heterocycloalkyl, CF<sub>3</sub>, SCF<sub>3</sub>, NHC(O)<sub>n</sub>R<sup>5</sup>, S(O)<sub>m</sub>R<sup>5</sup>, S(O)<sub>2</sub>NR<sup>5</sup>R<sup>6</sup>, C(S)NR<sup>5</sup>R<sup>6</sup>, CONR<sup>5</sup>R<sup>6</sup>, C(O)<sub>n</sub>R<sup>5</sup>;

n is 0, 1 or 2;

m is 0, 1 or 2;

10 R<sup>5</sup> is hydrogen, alkyl, aryl, alkylaryl, heterocycloalkyl, or heteroaryl and is unsubstituted or substituted by one or more groups selected from the group consisting of alkyl, C<sub>1-8</sub> alkoxy, aryl, heteroaryl, halogen, NO<sub>2</sub>, CN, N<sub>3</sub>, SCF<sub>3</sub>, and CF<sub>3</sub>;

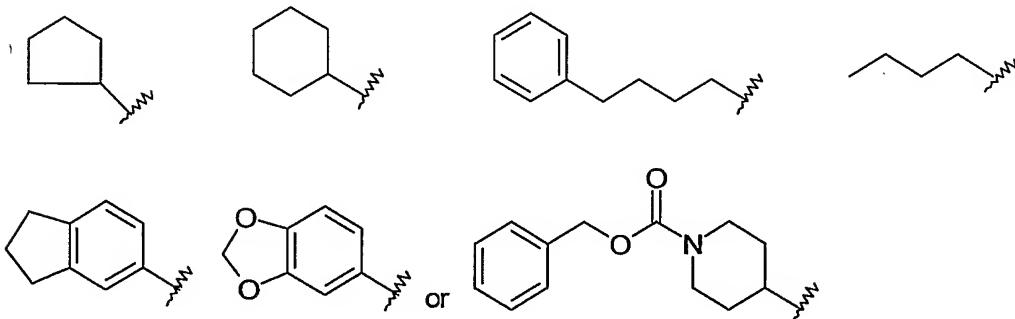
R<sup>6</sup> is hydrogen, alkyl, aryl, alkylaryl, heterocycloalkyl, or heteroaryl and is unsubstituted or substituted by one or more groups selected from the group consisting of alkyl,

15 C<sub>1-8</sub> alkoxy, aryl, heteroaryl, halogen, NO<sub>2</sub>, CN, N<sub>3</sub>, SCF<sub>3</sub>, and CF<sub>3</sub>, or when R<sup>1</sup> and/or R<sup>2</sup> contains S(O)<sub>2</sub>NR<sup>5</sup>R<sup>6</sup>, CONR<sup>5</sup>R<sup>6</sup>, or C(S)NR<sup>5</sup>R<sup>6</sup>, then R<sup>5</sup>R<sup>6</sup> together with the nitrogen may form a heterocyclic ring; or

a pharmaceutically acceptable salt or solvate thereof.

20 3. A compound of claim 1 wherein in formula (I) R<sup>1</sup>, R<sup>2</sup> are the same or are different and are independently C<sub>3-6</sub> alkyl, C<sub>3-6</sub> alkylene, C<sub>3-8</sub> cycloalkyl, C<sub>4-6</sub> alkylaryl, C<sub>3-4</sub> cycloalkylaryl, heterocycloaryl or heterocycloalkyl. Said C<sub>3-6</sub> alkyl or heterocycloalkyl may be optionally substituted with NHC(O)<sub>n</sub>R<sup>5</sup> or C(O)<sub>n</sub>R<sup>5</sup> wherein n is 2 and R<sup>5</sup> is lower alkylaryl as herein defined wherein said lower alkylaryl may be optionally substituted with one or more groups selected from F, NO<sub>2</sub>, or N<sub>3</sub>.

25 4. A compound according to claim 3 wherein R<sup>2</sup> is n-butyl and R<sup>1</sup> is

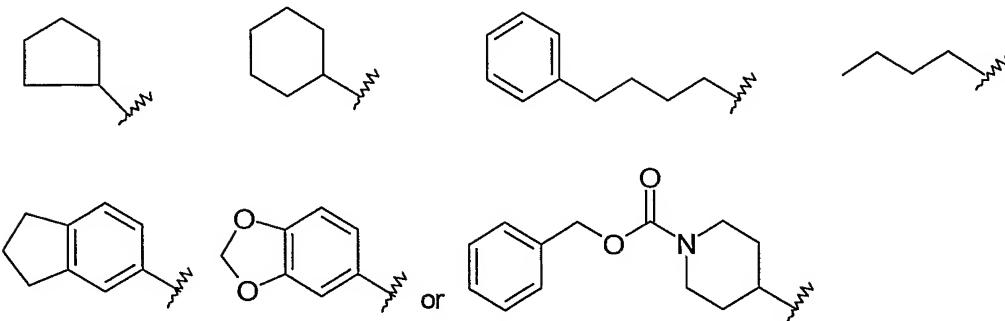


5. A compound according to claim 3 which is  
1,3-dicyclohexyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-trione,  
1-butyl-5-(diaminomethylene)-3-(2-methylbutyl)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-trione,  
5 1-butyl-5-(diaminomethylene)-3-(2,3-dihydro-1*H*-inden-2-yl)pyrimidine-  
2,4,6(1*H*,3*H*,5*H*)-trione,  
1-butyl-5-(diaminomethylene)-3-{4-[(trifluoromethyl)thio]phenyl}pyrimidine-  
2,4,6(1*H*,3*H*,5*H*)-trione,  
10 1-butyl-5-(diaminomethylene)-3-mesitylpyrimidine-2,4,6(1*H*,3*H*,5*H*)-trione,  
1-butyl-5-(diaminomethylene)-3-(2,4-difluorophenyl)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-  
trione,  
15 1-butyl-5-(diaminomethylene)-3-(2-fluorophenyl)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-trione,  
1-butyl-3-(cyclohexylmethyl)-5-(diaminomethylene)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-  
trione,  
15 1-butyl-3-cycloheptyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-trione,  
1-butyl-3-cyclooctyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-trione,  
1-butyl-5-(diaminomethylene)-3-(3-phenylcyclopentyl)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-  
trione,  
20 1-butyl-5-(diaminomethylene)-3-(5-phenylpentyl)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-trione,  
1-[3-(benzyloxy)phenyl]-3-butyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-  
trione,  
25 benzyl 3-[3-butyl-5-(diaminomethylene)-2,4,6-trioxotetrahydropyrimidin-1(2*H*)-  
yl]propylcarbamate,  
4-nitrobenzyl 3-[3-butyl-5-(diaminomethylene)-2,4,6-trioxotetrahydropyrimidin-1(2*H*)-  
yl]propylcarbamate,  
4-fluorobenzyl 3-[3-butyl-5-(diaminomethylene)-2,4,6-trioxotetrahydropyrimidin-  
1(2*H*)-yl]propylcarbamate,  
4-(2 $\lambda^5$ -triaza-1,2-dienyl)benzyl 3-[3-butyl-5-(diaminomethylene)-2,4,6-  
trioxotetrahydropyrimidin-1(2*H*)-yl]propylcarbamate,  
30 1-but-3-enyl-3-cyclopentyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H*,3*H*,5*H*)-trione,  
4-(2 $\lambda^5$ -triaza-1,2-dienyl)benzyl 4-[3-butyl-5-(diaminomethylene)-2,4,6-  
trioxotetrahydropyrimidin-1(2*H*)-yl]piperidine-1-carboxylate,  
benzyl 3-[3-butyl-5-(diaminomethylene)-2,4,6-trioxotetrahydropyrimidin-1(2*H*)-  
yl]pyrrolidine-1-carboxylate,

1-butyl-5-(diaminomethylene)-3-(3,5-dimethylisoxazol-4-yl)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
1,3-dibutyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
1-butyl-5-(diaminomethylene)-3-(4-phenylbutyl)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
5       benzyl 4-[3-butyl-5-(diaminomethylene)-2,4,6-trioxotetrahydropyrimidin-1(2*H*)-yl]piperidine-1-carboxylate,  
1-butyl-3-cyclopentyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
1-butyl-5-(diaminomethylene)-3-(2,3-dihydro-1*H*-inden-5-yl)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
10       1-(1,3-benzodioxol-5-yl)-3-butyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
1-butyl-3-cyclohexyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H,3H,5H*)-trione  
1,3-dibutyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
1-butyl-5-(diaminomethylene)-3-(4-phenylbutyl)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
15       benzyl 4-[3-butyl-5-(diaminomethylene)-2,4,6-trioxotetrahydropyrimidin-1(2*H*)-yl]piperidine-1-carboxylate,  
1-butyl-3-cyclopentyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
1-butyl-5-(diaminomethylene)-3-(2,3-dihydro-1*H*-inden-5-yl)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
20       1-(1,3-benzodioxol-5-yl)-3-butyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H,3H,5H*)-trione,  
1-butyl-3-cyclohexyl-5-(diaminomethylene)pyrimidine-2,4,6(1*H,3H,5H*)-trione, or  
a pharmaceutically acceptable salt thereof.

25       6.       A compound according to claim 2 wherein in formula (II) R<sup>1</sup>, R<sup>2</sup> are the same or are different and are independently C<sub>3-6</sub> alkyl, C<sub>3-6</sub> alkylene, C<sub>3-8</sub>cycloalkyl, C<sub>4-6</sub> alkylaryl, C<sub>3-4</sub>cycloalkylaryl, heterocycloaryl or heterocycloalkyl. Said C<sub>3-6</sub> alkyl or heterocycloalkyl may be optionally substituted with NHC(O)<sub>n</sub>R<sup>5</sup> or C(O)<sub>n</sub>R<sup>5</sup> wherein n is 2 and R<sup>5</sup> is lower alkylaryl as herein defined wherein said lower alkylaryl may be optionally substituted with one or more groups selected from F, NO<sub>2</sub>, or N<sub>3</sub>.

7 A compound according to claim 6 wherein R<sup>2</sup> is n-butyl and R<sup>1</sup> is



5 8. A compound according to claim 6 which is

6-amino-1,3-dibutyl-2,4-dioxo-1,2,3,4-tetrahydropyrimidine-5-carbothioamide or a pharmaceutically acceptable salt thereof.

10 9. A pharmaceutical composition comprising a compound of claim 1 in admixture with a pharmaceutically excipient.

10. A pharmaceutical composition comprising a compound of claim 2 in admixture with a pharmaceutically excipient.

15 11. A method for the prophylaxis of or treating osteoporosis in a mammal comprising administering an effective amount of a compound of claim 1 alone or in the form of a pharmaceutically acceptable excipient.

20 12. A method for the prophylaxis of or treating osteoporosis in a mammal comprising administering an effective amount of a compound of claim 2 alone or in the form of a pharmaceutically acceptable excipient.